



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/550,882

09/27/2005

Thomas Falck

De 030096

1755

24737

7590

09/05/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

AFSHAR, KAMRAN

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

09/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,882

Applicant(s)

FALCK ET AL.

Examiner

Kamran Afshar, 571-272-7796

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to the Preliminary Amendment filed on 09/27/2005.

Specification

1. The disclosure is objected to because of the following informalities:

CFR 1.78(a) (iii) requires the sentence in any non-provisional application:

(iii) If the later-filed application is a nonprovisional application, the reference required by this paragraph must be included in an application data sheet (§ 1.76), or the specification must contain or be amended to contain such reference in the first sentence(s) following the title.

Appropriate correction is required.

2. The disclosure is objected to because of the following informalities: The disclosure should include headings (i.e. FIELD OF THE INVENTION, DESCRIPTION OF THE RELATED Art, SUMMARY OF THE INVENTIVE). Appropriate correction is required.

Claim Objections

Claims 8 are objected to because of the following informalities:

Claim 8, recites wore(s) "capable of". It is noted that any programmable machine can be programmed to become capable of the claimed invention. It is suggested that wore(s) "capable of" be replaced by "adapted" or "configured".

Claims 9-10 are objected they are directly or indirectly depended on the objected claim 1. Appropriate correction is required.

Drawings

3. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Rejections - 35 USC § 112

4. Claims rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

claims 1 recite limitation(s) "(i ≠ k)", "(i, j)" in the abbreviation form. It is unclear what "i" and /or "k" and /or "j" are representing. They need to be clearly defined or deleted.

In view of language of claim 1, the language fails to provide any steps of discovering proximate apparatuses and services in a wireless network. In fact, the body of the claim is directed to component(s) i.e. base stations, apparatuses to be discovered. Therefore, it is unclear whether the claim directed to the method or the apparatus.

Claims 2-10 are rejected as they are directly or indirectly depended on the rejected claim 1.

Appropriate correction is required.

5. Claim 7 recites the limitation "the repetition frequency" in line 2. There is insufficient antecedent basis for this limitation in the claim.

6. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

It is unclear what is meant by the claim limitations of "at least four, preferably at least five, particularly at least six and particularly at least seven" as recited in claim 4. This is unclear.

Claims 4, 6, 7, recite terms "preferably", "particularly preferably", "particularly preferably averaged" renders the claim(s) indefinite because the terms "preferably", "particularly preferably",

Art Unit: 2617

particularly preferably averaged" in claims 4, 6-7 are relative terms, which renders the claim indefinite. The term "preferably", "particularly preferably", "particularly preferably averaged" is clearly not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

Appropriate correction is required.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/551,030. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the claimed limitations recited in the present application are transparently found in the copending application 10/551,030 with obvious wording variations. Take an example of comparing claim 1 of pending application and claims 1 and 2 of copending application 10/551,030:

Pending Application 10/550,882	Co-pending application 10/551,030
1. A method of discovering proximate apparatuses and services in a wireless network comprising <u>at least three base stations</u> (B_j), in which all apparatuses G_j ($j \neq k$) determine the <u>signal strengths $ss(i,j)$ at which they receive signals from the base stations B_j</u> , and the	1. A method of discovering proximate apparatuses and services in a wireless network with <u>at least one Access Point (AP)</u> , wherein an apparatus to be discovered periodically separates itself from its Access Point and builds up its own Ad Hoc Network (AHN) which can be

Art Unit: 2617

apparatuses to be discovered send these <u>signals to a searching apparatus</u> Gk.	recognized via its Service Set Identifier (SSID) by <u>a searching apparatus</u> .
	4. A method as claimed in claim 1, wherein the <u>searching apparatus</u> queries, via its WLAN transceiver, <u>the signal strength of the apparatuses</u> that have been found.

Therefore, the limitations in copending Application No. 10/551,030 encompassed in claimed limitation of the present invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 4, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Bell (U.S. 6, 600, 902 B1).

With respect to claim 1, APA discloses a method of discovering proximate apparatuses and services in a wireless network (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 of ¶ [0008]). However, the APA did not teach the network comprising at least three base stations, in which all apparatuses determine the signal strengths at which they receive signals from the base stations and the apparatuses to be discovered send these signals to a searching apparatus. In an analogous field of endeavor, Bell discloses the network

Art Unit: 2617

comprising at least three base stations (See Bell e.g. at least wireless stations 4, 5, 6, Co. 4, Lines 26-28, and system 2 of Fig. 1) in which all apparatuses determine the signal strengths at which they receive signals from the base stations (See Bell e.g. signal strength measurement Co. 5, Lines 4-7, signal strength measurement of Fig. 2) and the apparatuses to be discovered send these signals (See Bell links 7, 8, 9, of Fig. 1) to a searching apparatus (See Bell e.g. Co. 5, Lines 11-17). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Bell to APA to provide a signal strength measurement means so that the service discovery procedure is used to locate services that are available on or via devices in the vicinity of a BT enabled device as suggested (See bell e.g. 63-67).

Regarding claim 4, it is obvious that the wireless network comprises at least four, preferably at least five, particularly preferably at least six and particularly at least seven base stations (See Bell a wireless system comprising a plurality of wireless stations, Co. 3, Lines 36-37-38).

Regarding claim 8, it is obvious that by means of a Discovery Framework, "**preferably**" by means of Universal Plug&Play (UPnP), the searching apparatus is "**capable of**" accessing the services of the apparatuses to be discovered (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 and 8-10 of ¶ [0008]).

Regarding claim 9, it is obvious that the searching apparatus finds, by means of a Universal Plug&Play (UPnP) search among the apparatuses to be discovered, that apparatus which provides the desired service (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 and 8-10 of ¶ [0008]).

Regarding claim 10, it is obvious that in the case of replies to search requests (See Bell e.g. search request 35 of Fig. 3), each apparatus to be discovered (See Bell e.g. searching for wireless stations to be found, Co. 5, Lines 40-41) adds information about the signal strengths to the base stations with which it is in radio contact (See Bell, signal strength, Co. 5, Lines 4-7, wireless links, searches, link, data connection, Co. 5, Lines 11-17, exchanging information, Lines 48-49).

Art Unit: 2617

11. Claims 2-3, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Bell (U.S. 6, 600, 902 B1) further in view of Poykko (U.S. Pub. No.: 20050267677 A1).

Regarding claim 2, APA and Bell discloses everything as discussed in the rejected claim 1. However, APA and Bell do not teach the searching apparatus computes the distances of all apparatuses to be discovered from the signal strength and determines the standard deviations. In an analogous field of endeavor, Poykko discloses a device computes the distances of all apparatuses to be discovered from the signal strength (See Poykko e.g. Page 2, Lines 1-8 of ¶ [0039]) and determines the standard deviations (See Poykko e.g. a system of location estimation of mobile device, Page 1, Lines 2-3 of ¶ [0008], where d is the distance between MS and BTS measured, Page 16, Lines 2-3 of ¶ [00251], standard deviation, mean value etc., Page 7, Line 1 of ¶ [0124]). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Poykko to Bell and APA to provide a location estimation method or system based on received signal levels (or RSSI) as suggested (See Poykko e.g. Page 2, Lines 1-8 of ¶ [0039]).

Regarding claim 3, it is obvious that the searching apparatus (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 of ¶ [0008]) computes lower and upper limits (See Poykko e.g. estimating MS location, Page 18, Line 1 of ¶ [02777], upper and lower limit as $l=1$ to N , based on equation 154) and apparatuses to be discovered and utilizes these values so as to determine the absolute extent of the distance of the apparatuses (See Poykko e.g. extend to distance, Page 17, ¶ [0270], absolute values of the distances, Page 19, Lines 1-3 of ¶ [0298]).

Regarding claim 5, it is obvious that all apparatuses to be discovered (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 of ¶ [0008]) form a mean value from the signal strengths measured (See Poykko e.g. Page 2, Lines 1-8 of ¶ [0039]) within a given period of time (See Bell e.g. within a predetermined time, particularly within a time period in the order of minutes or less, Co. 3, Lines 22-24) and send this mean value to the searching apparatus which utilizes the mean value for computing the distance (See Poykko e.g. a

Art Unit: 2617

system of location estimation of mobile device, Page 1, Lines 2-3 of ¶ [0008], where d is the distance between MS and BTS measured, Page 16, Lines 2-3 of ¶ [00251], standard deviation, mean value etc., Page 7, Line 1 of ¶ [0124]).

Regarding claim 6, it is obvious that the period of time is 2 to 60 seconds, preferably 5 to 40 seconds and particularly 8 to 20 seconds (See Bell e.g. within a predetermined time, particularly within a time period in the order of minutes or less, Co. 3, Lines 22-24).

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Bell, Poykko and further in view of Fardeau (U.S. Patent 5, 574, 962 A).

Regarding claim 7, APA, Bell, and Poykko discloses everything as discussed above in rejected claim 1. Further APA teaches the apparatuses to be discovered (See APA e.g. Page 1, Discovery Frameworks i.e. UpnP providing the discovering apparatuses and services in the network, Lines 1-5 of ¶ [0008]), and Poykko teaches preferably averaged, signal strengths (See Poykko e.g. Average received signals, Page 3, Lines 1-2 of ¶ [0050]). However, APA, Bell, and Poykko do not explicitly teach repetition frequency at which the apparatuses to be discovered send their, preferably averaged, signal strengths to the searching apparatus is 0.1 to 50 Hz, preferably 0.25 to 25 Hz, particularly preferably 0.5 to 20 Hz and particularly 1 to 10 Hz. In an analogous field of endeavor, Fardeau teaches repetition frequency is 0.1 to 50 Hz, preferably 0.25 to 25 Hz, particularly preferably 0.5 to 20 Hz and particularly 1 to 10 Hz (See Fardeau e.g. repetition rate in the range 5 Hz to 20 Hz, range about 20, Co. 7, Lines 41-47). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Fardeau to APA, Bell, and Poykko to provide sufficient redundancy to reduce the risks of error on decoding, with the duration of the encoded identification message lying in the range about 3 s to about 20 s and with the repetition rate of its bits lying in the range 5 Hz to 20 Hz as suggested (See Poykko e.g. Co. 7, Lines 41-47).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Yost (U.S. 6,684,061 B1).

b) Shultz (U.S. Pub. No.: 2004/0203350 A1).

Art Unit: 2617

c) Finn (.S. Pub. No.: 2002/0128039 A1).

d) Reed (U.S. 6, 665, 549 B1).

e) Chang (U.S. 5, 765, 103 A).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Eng, George** can be reached @ (571) 272-3984. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Kamran Afshar